Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for compressing video information in a video sequence (I_t, I_{t+1}) comprising the steps of:

considering in said sequence a first video frame (B_t) containing image data;

segmenting said first video frame (B_t) into segments ($S_{t,i}$);

for each segment ($S_{t,i}$) of the first video frame (B_t):

searching, in a second video frame (I_{t+1}) following the first video frame (B_t) in the video sequence, a corresponding predicted segment ($S_{t+1,i}^{p,forward}$) which matches with the segment ($S_{t,i}$) of the first video frame (B_t) according to a predetermined similarity measure;

calculating a raw set of motion parameters ($M_{t,i}^{p}$) describing the motion between the segment ($S_{t,i}$) of the first video frame (B_t) and the corresponding predicted segment ($S_{t+1,i}^{p,forward}$) of said second video frame (I_{t+1}); and

for each corresponding predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}):

searching, in the first video frame (B_t), a corresponding segment ($S_{t+1,i}^{p,backward}$) that matches with the predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}) according to a predetermined similarity measure;

calculating a best set of motion parameters ($M_{t,i}^{p}+\Delta M_{t,i}^{p}$) describing the motion between the corresponding segment ($S_{t,i}^{p,backward}$) of the first video frame (B_t) and the predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}), said best set of motion parameters consisting in the raw set of motion parameters ($M_{t,i}^{p}$) corrected by a motion parameters correction ($\Delta M_{t,i}^{p}$).

2. (Original) A method according to claim 1, characterized in that it includes a step of calculating a residual frame (R_{t+1}) for the second video frame (I_{t+1}) describing the structural differences between the first video frame (B_t) and the second video frame (I_{t+1}).

3. (Previously Presented) A method according to claim 1, characterized in that it includes a step of calculating a set of overlapping parameters for each predicted segment ($S_{t+1,i}^{p,forward}$) resolving the intersections between said predicted segment ($S_{t+1,i}^{p,forward}$) and adjacent other predicted segments of the second video frame (I_{t+1}).

4. (Previously Presented) A method according to claim 1, characterized in that it includes a step of calculating, for each video frame (B_{t+1}), a set of overlapping parameters resolving the intersections between the predicted segments of the second video frame (I_{t+1}).

5. (Previously Presented) A method according to claim 1, characterized in that the first video frame (B_t) is a decompressed video frame corresponding to a frame (I_t) of the video sequence processed by said compression method and the corresponding decompression method.

6. (Previously Presented) A method according to claim 1, characterized in that the best set of motion parameters ($M_{t,i}^{p}+\Delta M_{t,i}^{p}$) is defined according to a multi-layer motion description in which a first layer contains the raw set of motion parameters ($M_{t,i}^{p}$) and a second layer contains the motion parameters correction ($\Delta M_{t,i}^{p}$), the information of the first and second layers being distinguished.

7. (Original) A method according to claim 6, characterized in that it includes a step of setting a flag to a first or a second predetermined value indicating whether the motion parameters correction ($\Delta M_{t,i}^{p}$) has to be used for the video information decompression.

8. (Previously Presented) A method according to claim 1, characterized in that it includes a step of determining a set of segmentation parameters defining the segmentation process implemented for segmenting the first video frame (B_t) into segments ($S_{t,i}$).

Claims 9-12: Cancelled.

13. (Previously Presented) A computer program product for a data processing unit, comprising a set of instructions, which, when loaded into said data processing unit, causes the data processing unit to carry out the method claimed in claim 1.

14. (Original) A device for compressing video information in a video sequence (I_t, I_{t+1}) comprising:

means for segmenting the first video frame (B_t) containing image data into segments ($S_{t,i}$);

means for searching, in a second video frame (I_{t+1}) following the first video frame (B_t) in the video sequence, a corresponding predicted segment ($S_{t+1,i}^{p,forward}$) which matches with the segment ($S_{t,i}$) of the first video frame (B_t) according to a predetermined similarity measure, for each segment ($S_{t,i}$) of the first video frame (B_t);

means for calculating a raw set of motion parameters ($M_{t,i}^{p}$) describing the motion between the segment ($S_{t,i}$) of the first video frame (B_t) and the corresponding predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}), for each segment ($S_{t,i}$) of the first video frame (B_t);

means for searching, in the first video frame (B_t), a corresponding segment ($S_{t,i}^{p,backward}$) that matches with the predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}) according to a predetermined similarity measure, for each corresponding predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1});

means for calculating a best set of motion parameters ($M_{t,i}^{p}+\Delta M_{t,i}^{p}$) describing the motion between the corresponding segment ($S_{t,i}^{p,backward}$) of the first video frame (B_t) and the predicted

segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}), said best set of motion parameters consisting in the raw set of motion parameters ($M_{t,i}^{p}$) corrected by a motion parameter correction ($\Delta M_{t,i}^{p}$), for each corresponding predicted segment ($S_{t+1,i}^{p,forward}$) of the second video frame (I_{t+1}).

Claim 15: Cancelled.

16. (Previously Presented) Compressed data corresponding to a video sequence, characterized in that it has been obtained by a compression method according to claim 1 and applied on said video sequence.